clarion®

Owner's manual & Installation manual
Mode d'emploi et manuel d'installation
Manual de usario e instalación

CMS 1

MARINE MECHANISM-LESS SOURCE UNIT
UNITÉ DE SOURCE MARINE SANS MÉCANISME
UNIDAD FUENTE MARINA SIN MECANISMO

CLARION PRODUCT REGISTRATION INFORMATION

For USA and Canada only
www.clarion.com

Dear Customer:

Congratulations on your purchase of a Clarion mobile electronic product. We are confident that you'll enjoy your Clarion experience.

There are many benefits to registering your product. We invite you to visit our website at **www.clarion.com** to register your Clarion product.

We have made product registration simple with our easy to use website. The registration form is short and easy to complete. Once you're registered, we can keep you informed of important product information.

Register at **www.clarion.com** - it's easy to keep your Clarion product up to date.

Contents

1. FEATURES

- Sirius Radio Ready
- Weather Band Radio
- Watertight & Corrosion Proof
- Rear USB Connector
- 40W x 4 Built-In Amplifier
- Compatible with iPod®

Plays Windows Media™   Made for iPod   SIRIUS READY *DC*   *MP3* ID3 TAG   USB

2. PRECAUTIONS

⚠ WARNING

- **For your safety, while boating, keep the volume to a level at which external sounds can be heard.**

1. This unit has precision parts inside. Even in the event that trouble arises, never open the case, disassemble the unit, or lubricate the parts.

2. This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to consult the dealer or an experienced radio/TV technician for help.

INFORMATION FOR USERS:

CHANGES OR MODIFICATIONS TO THIS PRODUCT NOT APPROVED BY THE MANUFACTURER WILL VOID THE WARRANTY AND WILL VIOLATE FCC APPROVAL.
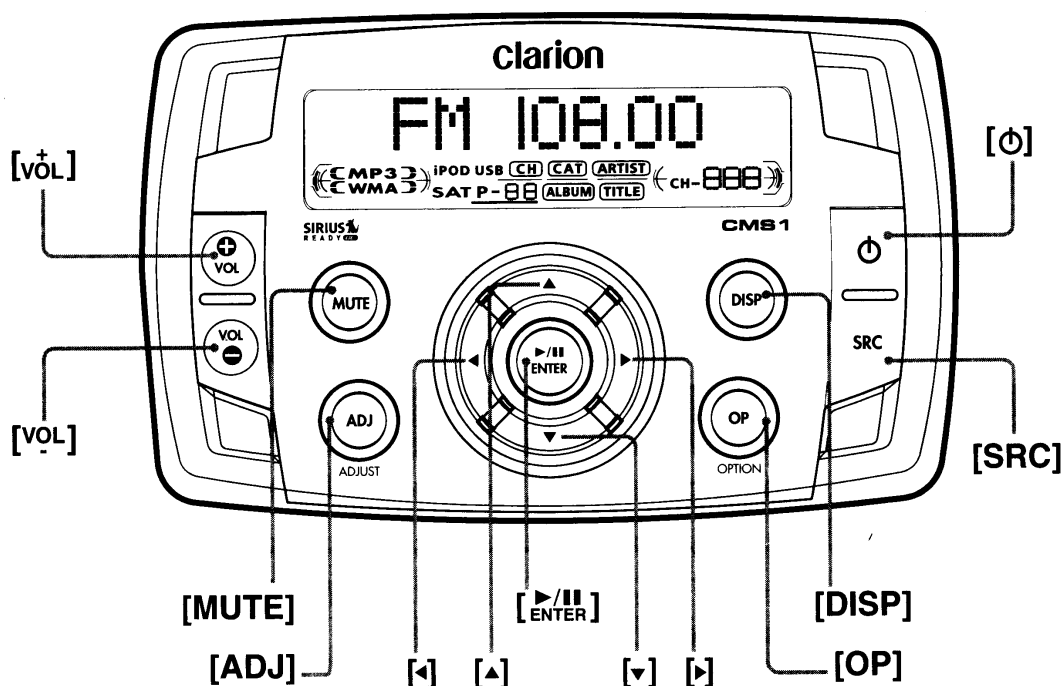
C E   MODEL   **CMS1**   clarion

USA: AM530-1710kHz, FM 87.9-107.9MHz
12V ⊖ GROUND   EUROPE: AM522-1620kHz, FM87.5-108.0MHz

This product includes technology owned by Microsoft Corporation and cannot be used or distributed without a license from MSLGP.

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

THIS PRODUCTION COMPLIES WITH DHHS RULES 21 CFR SUBCHAPTER J APPLICABLE AT DATE OF MANUFACTURE.

CLARION CORPORATION OF AMERICA
6200 GATEWAY DRIVE, CYPRESS, CALIFORNIA 90630, USA

MANUFACTURED:

MANUFACTURER: SMX

SERIAL NO.

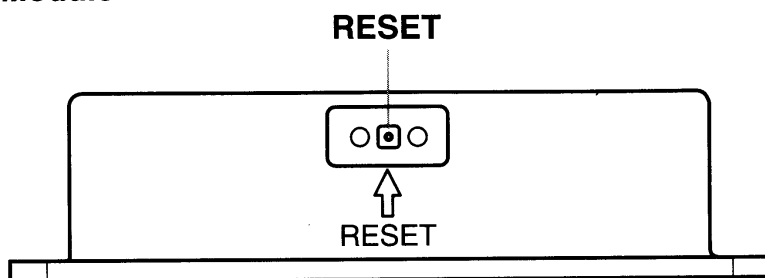MADE IN CHINA

3. CAUTIONS ON HANDLING

- Protect product from water. Do not submerge or expose the product directly to water, as this can cause electrical shorts, fire or other damages.
- Protect from high temperature. Expose to direct sunlight for an extended period of time can produce very high temperature in your vessel. Cool down the interior before starting the playback.

4. CONTROLS

Source Unit

Tuner Module

RESET

RESET

About the registered marks, etc.

- Windows Media™ and the Windows® logo are trademarks, or registered trademarks of Microsoft Corporation in the United States and/or other countries.

- "Made for iPod" means that an electronic accessory has been designed to connect specifically to iPod and has been certified by the developer to meet Apple performance standards.
  Apple is not responsible for the operation of this device or its compliance with safety and regulatory standards.
  iPod is a trademark of Apple Inc., registered in the U.S. and other countries.

Name of Buttons and their Functions

Note:
Be sure to read this chapter while referring to the front diagram in chapter "**4. CONTROLS**"

SOURCE UNIT

[⏻] Power Button
• Press the button to turn power on or off.

[vȯL] [vo̠L] Volume Button
• Press **VOL+** button to increase the volume.
• Press **VOL-** button to decrease the volume. The maximum volume level is "46".

[MUTE] Button
• Press this button to mute the audio output.
• Press it again to restore the audio output.

[SRC] Source Button
• Press **SRC** button to switch modes among FM, AM, Weather Band, Sirius, USB, iPod and AUX In (Optional Auxiliary Input).

[ADJ] Adjust Button
• Press **ADJ** to access the adjust menu.

  Bass Level
  Use the VOLUME buttons to adjust the Bass level range from "-6" to "+6". Default setting is "0".

  Treble Level
  Use the VOLUME buttons to adjust the Treble level range from "-6" to "+6". Default setting is "0".

  Balance
  Use the VOLUME buttons to adjust the Balance between the left and right speakers from "L12" (full left) to R12 (full right). Default setting is C00.

  Fader
  Use the VOLUME buttons to adjust the Fader between the rear and front speakers from "R12" (full rear) to F12 (full front). Default setting is C00.

  Loud
  Use the VOLUME buttons to select Loudness between ON and OFF. Default setting is OFF.

  Contrast
  Use the VOLUME buttons to see LCD contrast from 01-08. Default setting is 03.

  Beep
  Use the VOLUME buttons to select Beep tone between ON and OFF. Default setting is ON

  Reset yes
  Press ENTER button to return the EEPROM to factory default set up values.

[DISP] Display Button
• Press this button to switch the display indication.
• Press and hold the button to scroll display.

[OP] Option Button
• Press option button to access option menu items for necessary functions in every mode.
• In different modes, the option menu items are different. Please see the operation introduction of every mode for more details.

[▶/❚❚ ENTER] Play/Pause/Enter Button
• Press this button for 2 seconds to Play or Pause.
• Press this button to confirm operations in Tuner Mode, Weather Band Mode, Sirius Radio mode, iPod mode and USB mode.

[◀] [▶] Tuning Down, Tuning Up Buttons
• Use these buttons for tuning up and down in Tuner Mode, Weather Band Mode, Sirius Radio mode, iPod mode and USB mode.

[▲] [▼] Search Up, Search Down Buttons
• Use these buttons for search up and down in Tuner Mode, Weather Band Mode, Sirius Radio mode, iPod mode and USB mode.

TUNER MODULE
[RESET] Button
• Press RESET button with a ball point pin to:
  1. Initiate installation after all wiring is completed.
  2. Function buttons do not operate.
  3. Error symbol on display.

5. OPERATIONS

Basic Operations

Note:
- Be sure to read this chapter referring to the chapter "4. CONTROLS".

⚠ CAUTION

When the unit is turned on, starting and stopping the engine with its volume raised to the maximum level may harm your hearings. Be careful about adjusting the volume.

Turning on and off the power

Note:
- Start the engine before using this unit.
- Be careful about using this unit for a long time without running the engine. If you drain the vessel battery too far, you may not be able to start the engine and this can reduce the service life of the battery.

1. Start the engine. The power button / knob illumination on the unit will light up.

Engine ON position

2. Press the [⏻] power button to turn On or Off the power.

Selecting a mode

1. Press **[SRC]** button to display source menu.
    * External equipment not connected to this unit is not displayed.

2. Press the **[ENTER]** button to select desired mode.

Adjusting the volume

1. Press **VOL+** button to increase the volume.
2. Press **VOL-** button to decrease the volume.

⚠ CAUTION

While boating, keep the volume level at which external sound can be heard.

Mute

Press the **[MUTE]** button to turn the mute On and Off.

Radio (AM/FM) Operation

[◄] [►] Tuning Down, Tuning Up Buttons
1. Auto Seek tuning Up/Down:
   Press this button less than 2 seconds to automatically seek the next strong section.
2. Manual Tuning Up and Down:
   Press and hold this button more than 2 seconds to seek stations down step by step.

[ENTER] Button
Press this button to confirm the operation.

[OP] Option Button
Radio Mode Options:
┌→ Normal→Auto Store→Manu Store ┐

1. Auto Store: Press OPTION button to access Auto Store, then press ENTER button to automatically select six strong stations and store them into six presets. The new stations replace any stations already stored in the band. The unit will pause for 5 seconds at each preset station after Auto Store is completed.

2. Manu Store: Select a station that you want to store. Press OPTION button to access Manual Store. Press ENTER button to go into manual store interface. The preset number is flashing. Press up or down key to select a preset number. Press ENTER button again to store current station into preset.

[▲] [▼] Search Up, Search Down Buttons
1. Recall Preset Down: P6→P5→P4→....P1
2. Recall Preset Up: P1→P2→....P5→P6

Area set
This option allows you to select the appropriate frequency spacing for your area.
1. Press and hold the [MUTE] and [ADJUST] buttons at the same time for more than 2 seconds to get into the world tuner frequency /region setting.
2. Use [◄] or [►] button to select the region. Press [ENTER] to confirm the selection.
NOTE: Default is USA frequency. Once the region is changed, all the stations in the preset memory will be erased.

Weather Band Operation

[►] Tuning Up Button
1. Press and hold this button more than 2 sec's, to seek the available among all 7 weather band stations step by step.

[◄] Tuning Down Button
1. Press and hold this button more than 2 sec's, to seek the available stations among all 7 weather band stations step by step.

[ENTER] Button
Press this button to confirm the operation.

[OP] Option Button
WB Mode options:
┌→ Normal→ Scan ┐

1. Scan: the unit will pause for 5 sec's at each strong station circularly, press ENTER button to stop scan function.

Sirius Radio Operation

Channel Up [▶] /Down [◀] Operation
1. Channel Up/Down tuning:
   Press this button less than 2 seconds to
   search for a channel.
2. Fast Search Channel Up and Down:
   Press and hold this button more than
   2 seconds to fast search.

[ENTER] Button
Press this button to confirm the operation.

Category Tuning Up [▲] and Down [▼]
Category tuning:
1. Press Up or Down to access Category
   search. LCD will display "Category" for
   1 second, then display category name.
2. While in the Category, press Up or
   Down button to view category name.
3. Press ENTER or press Right button to
   choose desired channel in that category.
4. Press Up or Down button to select a
   channel within chosen category.
5. Press ENTER to confirm channel selection.
*Note: When selecting channel, press Left [◀]
to return to last selected category.*

[OP] Option Button
Sirius Mode Options:
┌→Normal→Call Preset→Manu Store┐
└────────────────────────────────┘

1. Call Preset: Press OPTION button to access
   Recall Presets and then press ENTER button
   into Recall Preset mode. Press Up/Down
   button to choose preset among P1-P18.
   Press ENTER button to exit Recall Preset
   mode or it will automatically exit Recall Preset
   mode after 10 seconds if there is no operation.
2. Manu store: Select a channel which you
   want to store, then press OPTION button to
   access Manual Store. Press ENTER button
   to go into manual store interface, the preset
   number is flashing. Press Up or Down button
   to select a preset number. Press ENTER
   button again to store current channel into
   preset.

[DISP] Display button
Press this button to check the channel info
like Artist name, song title, category, channel
name.
*Note: This unit doesn't support Skip/Lock
function. If a channel is locked/skipped in
the Sirius Tuner, then connected to this
unit, the channels will remain locked/
skipped.
To unlock or unskip the channels, you need
to put the Sirius Tuner back into another
dock that is available for unlocking or
unskipping channels.*

iPod Mode Operation

[▶] Up / [◀] Down Buttons
1. Press this button less than 2 seconds to play next/previous track.
2. Press and hold this button more than 2 seconds to fast forward/backward the song.

[ENTER] Button
Press this button to confirm the operation.

iPod Search [▲] Up / [▼] Down
1. Press Up/Down button to enter iPod search mode.
2. Press Up/Down button to select among Play lists→Artists→Albums→Genres→ Songs→Composers.
3. Press ENTER key or RIGHT button to confirm selecting Play lists or Artists or Albums or Genres or Songs or Composers.
4. When LCD display the desired Play list or Artist or Album or Genre or Composer, press ENTER, then the Music file will be displayed on LCD.
5. Press Up/Down button to select File.
6. Press ENTER key to confirm wanted File.
7. Play the file.
Note: When selecting file, press Left button to return last layer (Album).

[OP] Option Button
iPod Mode Options:

┌→ Normal→Repeat Song→ Random All→
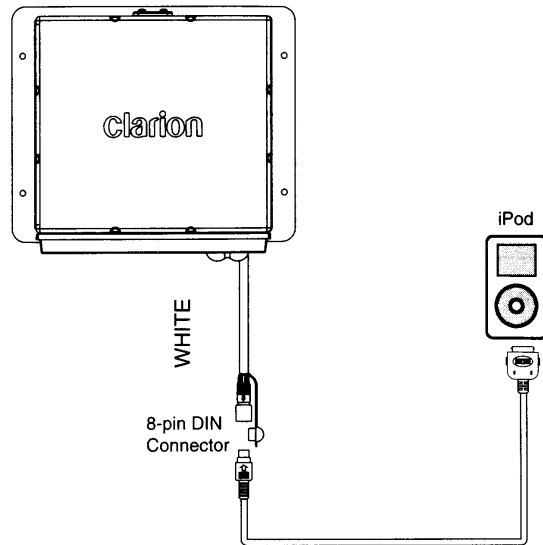│   → Random Folder ┐

[DISP] Display button
Press this button to check iPod information.
Note:
This unit does not support iPod direct connection to USB port.
The iPod must be connected to tuner module (white color) thru 8-pin Din extension cable.

USB Mode Operation

NOTE: CMS1 does not support removable hard drive.

[▶] Up / [◀] Down Buttons
1. Press this button less than 2 seconds to play next/previous track.
2. Press and hold this button more than 2 seconds to fast forward/backward the song.

[ENTER] Button
When under normal playing status, it works as Play/Pause function. When entering into ADJ menu or OPTION menu it works as Enter function.

Navigate Search [▲] Up / [▼] Down
1. Press Up/Down button to enter Navigate mode. LCD will display "Navigate" for 1 second. Then it will display the Folder or File name.
2. Press Up/Down button to select Folder.
3. Press ENTER key to confirm wanted Folder, or press Right [▶] button to go directly to wanted Folder.

4. Display file (Song)
5. Press [▲] Up/ [▼] Down button to select File.
6. Press ENTER key to confirm wanted File
7. Play the File.
Note: When selecting file, press Left button to return last layer (Folder).
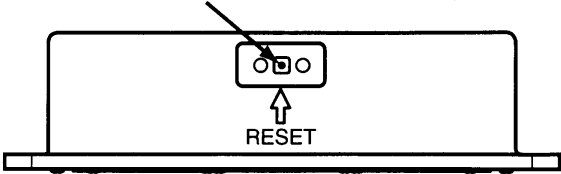
[OP] Option Button
USB Mode Options:

┌→ Normal→Repeat Song→ Repeat
│   Folder→Intro All→ Intro Folder→
│   Random All→ Random Folder ◀┐

1. Press OP button to access Option menu.
2. Press OP button to select the Option items.
3. Press ENTER button to proceed the selected Option item.

[DISP] Display button
Check MP3 information.

6. TROUBLESHOOTING

Problem	Cause	Measure
The unit will not power on	The vessel's accessory switch is not on	If the power supply is properly connected to the vessel's accessory terminal, switch the ignition key to "ACC"
	The fuse is blown	Replace the fuse
No sound	Volume is set too low	Increase the volume to audible level
	Wiring is not properly connected	Correct wiring connections
The commander is not responding	The built-in internal processor is not operating properly	Press the RESET button with a ball point pen
Auto seek function can not find any stations	The antenna cable is not connected	Insert the antenna cable securely
	The signals are too weak	Select a station manually

7. SPECIFICATIONS

FM Tuner

Frequency Range: USA   87.9-107.9MHz
                  Europe   FM87.5-108.0MHz
Usable Sensitivity: 4μV (S/N=30dB)
Image Rejection: >45dB
Stereo Separation: >25dB

AM/MW Tuner

Frequency Range: USA   AM530-1710kHz
                  Europe   AM522-1620kHz
Usable Sensitivity: 36dB (S/N=20dB)

Weather Band Selection

CH.1 162.400MHz CH.2 162.425MHz CH.3 162.450MHz
CH.4 162.475MHz CH.5 162.500MHz CH.6 162.525MHz
CH.7 162.550MHz

Audio

Maximum Power Output: 40W x 4
Bass Control (100Hz):   ±10dB
Treble Control (10kHz): ±10dB

General

Power Supply Voltage: 14.4V DC (10.8 to 15.6V allowable)
Grounding System: Negative Ground
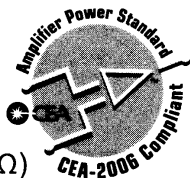Speaker Impedance: 4-8 ohms per channel

NOTE:
*Specifications and design are subject to change
without notice for further improvement.*

Power Output:
16W RMS x 4 Channels at 4Ω
and 1% THD+N

Signal to Noise Ratio:
74 dBA (reference: 1 W into 4 Ω)

Amplifier Power Standard
CEA-2006 Compliant

INSTALLATION AND WIRE CONNECTION MANUAL

■ Contents

1. BEFORE STARTING

1. This set is exclusively for use in vessels with a negative ground 12 V power supply.
2. Read these instructions carefully.
3. Be sure to disconnect the battery " – " terminal before starting. This is to prevent short circuits during installation. (Figure 1)
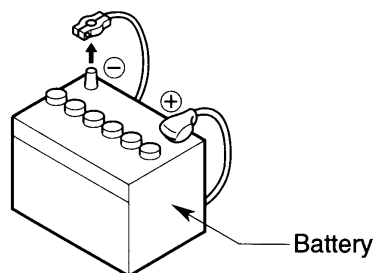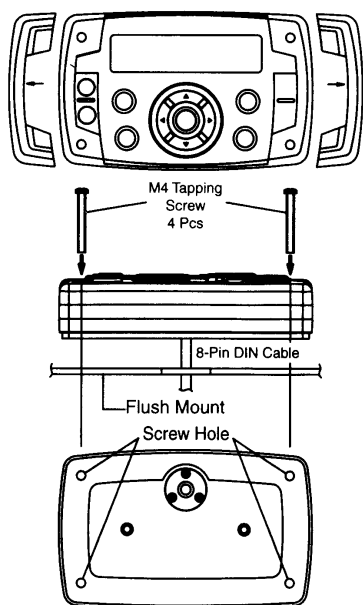

Battery

Figure 1

2. PACKAGE CONTENTS

1. Main Unit... 1
2. Tuner Module 1
3. Owner' manual & Installation Manual .. 1
4. 12-Pin Molex fm connector.................. 1
5. 8-Pin DIN 10' Extension Cable 1
6. Tapping Screw M4 8
7. Machine Screw M4 2
8. Rubber Stopper 4
9. Mounting Bracket................................ 1
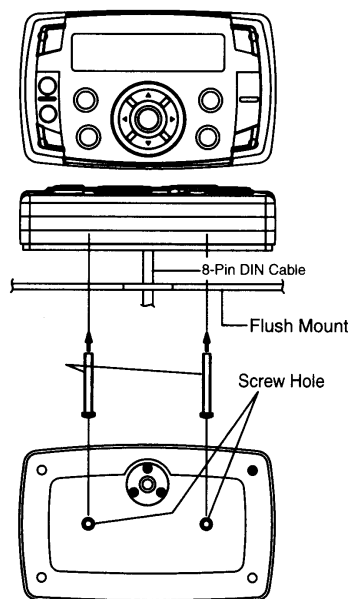
3. INSTALLATION CAUTIONS

1. In order to avoid any interference, do not install the tuner module or control unit in the proximity of the engine compartment.
2. The use of unauthorized parts can cause permanent damage to the unit.
3. Always check your wire connections to ensure proper installation before turning on the unit.
4. Consult with your nearest dealer for proper installation or if common parts need to be used. Seek assistance if modifications or drilling holes to your vessel is needed.
5. Do not install the unit where it will be subjected to excessive moisture, dust, dirt, foreign particles or vibration. Areas of high temperature from the engine, direct sunlight, heater or hot air should also be avoided.
6. Do not install the unit in a location where it will interfere with the vessel operation, or it will injure the passengers if there is a sudden or emergency stop.
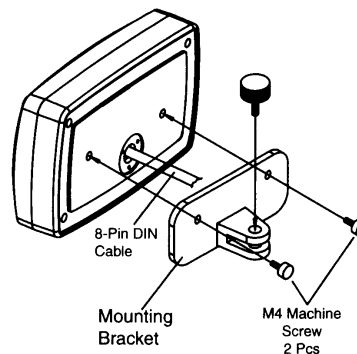
4. MAIN UNIT INSTALLATION

1. The control unit should be mounted to a dry, clean and flat surface. Ensure the rear gasket is fully sealed to the mounting surface without distorting the unit.
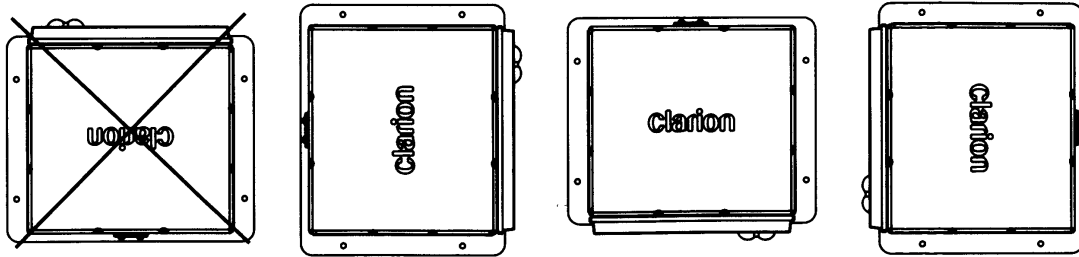2. Select one of the three recommended methods that best fit your vessel.

Method 3
This method requires the purchase of the optional Gimbal mount accessory.
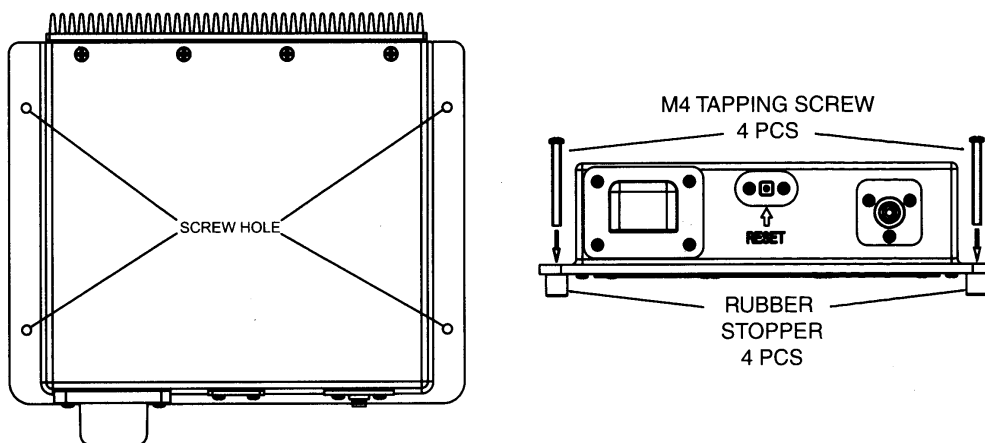
Method 1

Method 2

5. TUNER MODULE INSTALLAION

1. Select an area with sufficient ventilation for the mounting of the tuner module in order to prevent the module from overheating. You may mount the module in a horizontal or vertical position. If the module is mounted in a vertical position, do not mount the module with the harness exit points directly facing up to prevent water collecting in these areas.
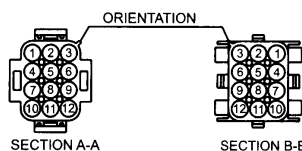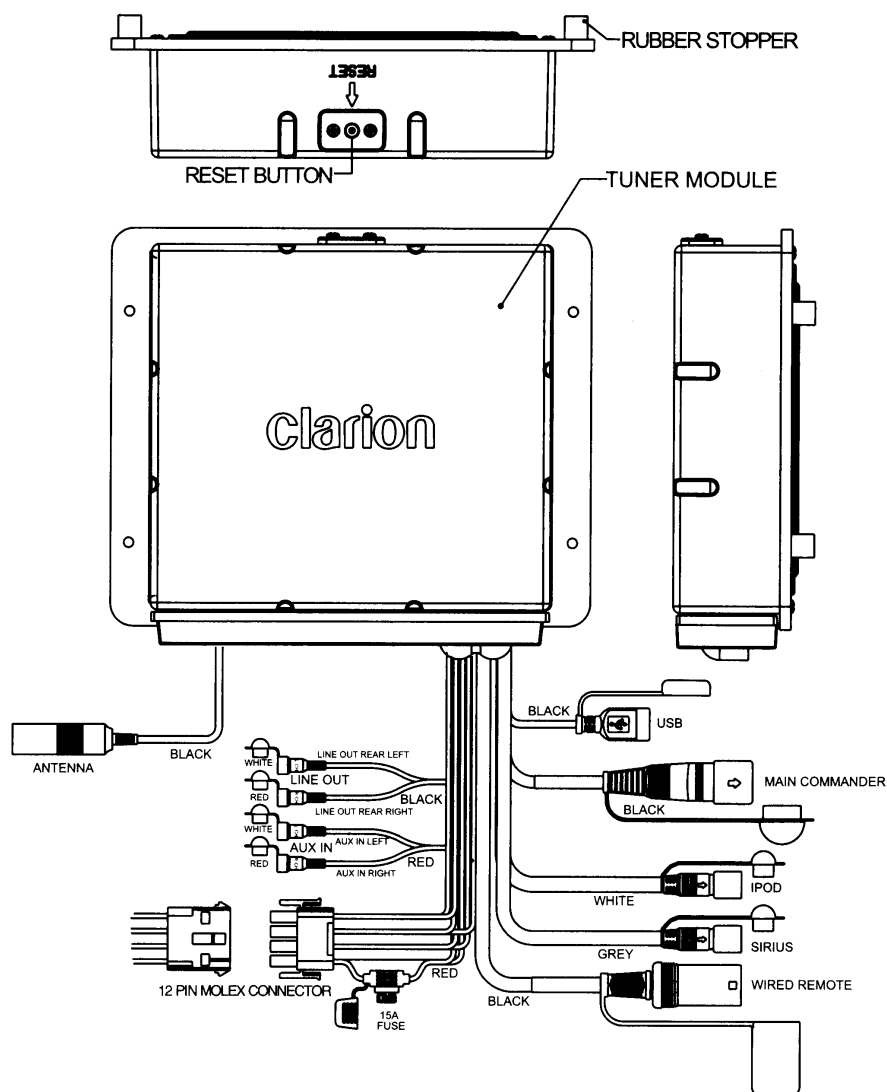
2. Please refer to the diagram below for the mounting screw hole positions. Always use the shortest length of screw possible.

3. During installation, use the 4 rubber mounting stoppers (included in the package) for the bottom of the module. This provides clearance from surface moisture and provides sufficient ventilation for the heat sink.

4. Extension wires/cables may be needed to route the harness and cable throughout the vessel.
    Note: Retain some slack in the harness/ cables to prevent damage to the wires.
    It is recommended relieve stress in all cables and harnesses.

5. Always read through the wiring diagram in this manual first, and follow all the wiring diagrams carefully. The connections should be secured and insulated with crimp connectors or electrical tape to ensure proper connections.

6. Once the wiring connections are completed, connect the negative terminal on the battery, turn the vessel accessory ON and power on the unit to check if it is operating correctly. If abnormalities occur, disconnect the battery negative terminal, recheck all wiring and try again. Please refer to the troubleshooting section for assistance.
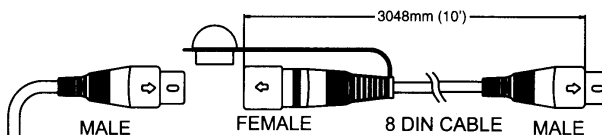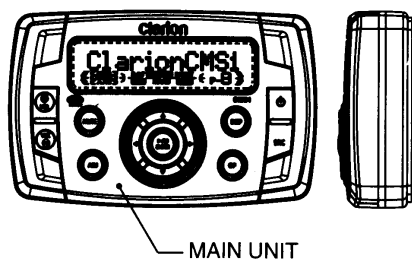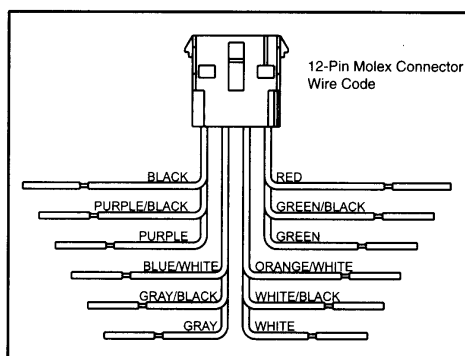
TUNER MOUNTING

SCREW HOLE

M4 TAPPING SCREW
4 PCS

RESET

RUBBER
STOPPER
4 PCS

6. WIRE CONNECTION

RUBBER STOPPER

RESET

RESET BUTTON

TUNER MODULE

clarion

ANTENNA

BLACK

WHITE
LINE OUT REAR LEFT

LINE OUT
BLACK
RED
LINE OUT REAR RIGHT

WHITE
AUX IN LEFT

AUX IN
RED
RED
AUX IN RIGHT

BLACK
USB

MAIN COMMANDER
BLACK

WHITE
IPOD

GREY
SIRIUS

WIRED REMOTE

12 PIN MOLEX CONNECTOR

RED

15A
FUSE

BLACK

ORIENTATION

1 2 3
4 5 6
7 8 9
10 11 12

3 2 1
6 5 4
9 8 7
12 11 10

SECTION A-A   SECTION B-B

PIN NO.	WIRE COLOR	WIRE DEFINITION	AWG
1	GREEN	SPEAKER REAR LEFT (+)	20
2	GREEN/BLACK	SPEAKER REAR LEFT (-)	20
3	RED	ACC (+12V)	16
4	WHITE	SPEAKER FRONT LEFT (+)	20
5	WHITE/BLACK	SPEAKER FRONT LEFT (-)	20
6	ORANGE/WHITE	ILLUMINATION	20
7	GREY	SPEAKER FRONT RIGHT (+)	20
8	GREY/BLACK	SPEAKER FRONT RIGHT (-)	20
9	BLUE/WHITE	REMOTE (+)	20
10	PURPLE	SPEAKER REAR RIGHT (+)	20
11	PURPLE/BLACK	SPEAKER REAR RIGHT (-)	20
12	BLACK	GROUND (-)	16

12-Pin Molex Connector
Wire Code

BLACK   RED
PURPLE/BLACK   GREEN/BLACK
PURPLE   GREEN
BLUE/WHITE   ORANGE/WHITE
GRAY/BLACK   WHITE/BLACK
GRAY   WHITE

3048mm (10')

MALE   FEMALE   8 DIN CABLE   MALE

ClarionCMS1

MAIN UNIT